## REMARKS

The above amendments have been made to make minor editorial changes so as to generally improve the form of the specification. Also, the present Preliminary Amendment is submitted to delete the multiple dependency of the claims, thereby placing such claims in condition for examination and reducing the required PTO filing fee.

Attached hereto is a marked-up version of the changes made to the specification and claims by the current Preliminary Amendment. The attached page is captioned "**Version With Markings to Show Changes Made**".

Respectfully submitted,

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Version with Markings to Show Changes Made

In this first embodiment, when a lens [level] shift before a seek is insignificant and a seek is carried out in units of several seeks that hardly cause lens shift, the number of seeks is set at minimum. At other times, the number of seeks is determined on the basis of the amount of lens shift before seek and the number of seeks. Thereby, generation of unnecessary seeks is avoided to improve access time.

In a block diagram of figure 1, the amount of offset of a lens 14 is inputted to an A/D converter terminal of a CPU 21 of the optical disk drive from a pickup 13 through an analog front end IC 18. Therefore, the CPU 21 performs A/D conversion of an output signal from a photoreceptor unit of the pickup 13 by software or] a built-in A/D converter and detects an offset, thereby obtaining the offset amount and offset direction of the lens. Thereby, a lens offset measuring means (not shown) which measures the amount of offset from the center of the lens in the pickup, which occurs at a seek of the pickup, is constructed.

To make the first embodiment correspond to the invention according to Claim 1, when a seek is to be performed first according to a read instruction from the host 22, the CPU 21 measures an offset of the lens and determines a seek position by the following formula (1):

$$SeekPos = ReadPos - (|offset|/\alpha + T/\beta) \cdots (1)$$

wherein, SeekPos: seek position (sector)

(Embodiment 3)

A third embodiment which corresponds to an optical disk drive as defined in Claims 7, 8, and 9 of the present invention will be described with reference to figures 1, 15, 16, 17, and 18.

In this third embodiment, a seek position is set just before a read start position, and the processing shifts to read when a lens shift after the seek is in a level having no problem. When a lens shift occurs, a kickback of one track is performed and continued until the lens shift is settled. Therefore, the access time is improved because the processing promptly shifts to read when no lens shift occurs. On the other hand, when a lens shift occurs, this is suppressed by kickback to improve reading performance.

In the block diagram of figure 1, the amount of offset of a lens 14 is inputted to an A/D converter terminal of a CPU 21 from a pickup 13 via an analog front end IC 18. Therefore, the CPU 21 subjects an output signal from a photoreceptor unit of the pickup 13 to A/D conversion using a software or built-in A/D converter, and detects an offset, thereby obtaining the offset amount and offset direction of the lens.

In order to make the third embodiment correspond to the invention according to Claim 7, when a seek is to be performed first according to a read instruction from a host 22, the CPU 21 measures an offset of the lens at seek end. In figure 15,

the seek position setting means changes a seek position for a target position according to a rotation speed of a disk.

4. A controller for driving a pickup of an optical disk drive comprising:

a lens offset measuring means for measuring the amount and direction of an offset of a lens from the center of the lens in a pickup at seek end, and storing them; and

a seek position setting means for comparing an offset amount and an offset direction just before a seek with the offset amount and the offset direction stored in the lens offset measuring means when the number of seek tracks of a next seek is smaller than a predetermined value, thereby calculating the movement of a feed just before the seek, which feed movably supports the pickup and, on the basis of the calculation result, setting, in a pickup driving means, a seek position where the seek toward the target position of the pickup is to be ended.

5. A controller for driving a pickup of an optical disk drive as defined in Claim 4, wherein:

the seek position setting means changes the seek position for the target position according to a rotation speed of a disk.

6. A controller for driving a pickup of an optical disk drive as defined in Claim 1 [or 4], wherein:

the seek position setting means sets a seek position for a target position at least one sector before the target position.

7. A controller for driving a pickup of an optical disk drive comprising:

a lens offset measuring means for measuring the amount of an offset of a lens from the center of the lens in a pickup; and

a seek position setting means for setting, in a pickup driving means, a seek position where a seek toward a target position of the pickup is to be ended as well as a seek position at kickback so that kickback for seeking the pickup in an inverse direction of the original seek is performed until the amount of offset at seek end becomes smaller than a predetermined value.

8. A controller for driving a pickup of an optical disk drive as defined in Claim 7, wherein:

the seek position setting means employs the amount of an offset of a lens from the center of the lens in the pickup at a point of time where a read error occurs, as a value to be compared with the amount of offset at seek end.

9. A controller for driving a pickup of an optical disk drive as defined in Claim 8, wherein: